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ART UNIT	PAPER NUMBER
2611	5

DATE MAILED: 01/19/93

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 03 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-15 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-15 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claim 2 is rejected under 35 U.S.C. § 102(a) as being anticipated by Gilhousen et al.

Gilhousen et al includes all of the claimed limitations as fully set forth in claims 2 of the present invention (column 3 lines 19-68, column 4, lines 16-68).

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this

section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same obligation person or subject to an of assignment to the same person.

4. Claims 1, 3-15 are rejected under 35 U.S.C. § 103 as being unpatentable over Gilhousen et al in view of Bruckert.

Gilhousen et al differ from claims 1, 7-10 and 14 of the present invention in that it is not provided with limitations of the first and second base stations transmitting signals on the same frequency but with different codes. However, Bruckert teaches a CDMA radio system in which for purposes of simplicity, the first base station 11, second base station 12 and third base station 13 (fig. 3) transmit signals with the same frequency (f1) to the remote unit 13, but with different codes C1, C2 and C3, respectively (fig. 3, column 5 lines 6-18). It would have been obvious to one of ordinary skill in the art to modify the Gilhousen CDMA cellular telephone system with the Bruckert teachings of transmitting signals on the same frequency with different codes by using CDMA modulation techniques, thereby reducing numbers of radio channels needed and having a benefit of simplicity.

Regarding claim 4, Gilhousen et al teach a step of "error correcting demodulated signals" (column 10 lines 35-38).

Regarding claims 5 and 6, Gilhousen et al teach a step of "diversity selection of symbols from said first and second demodulated signals" (column 9 lines 50-58), and step of

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"diversity combination of said first and second demodulated signals" (column 10 lines 27-38), respectively.

Gilhousen et al include all claimed limitations as set forth in claims 3, 11-13 and 15 (column 3 lines 45-65).

5. Claims 5, 7-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 3 the term "symbols" lacks clear antecedent basis.

In claim 7, line 15 should "sending said signal" be changed to --sending said signal indicative of signal strengths--?

In claim 10, line 7 the term "transmitting traffic" has no clear meaning. Also in claim 10, lines 17-18 should "transmitting a signal" be changed to --transmitting a traffic signal--?

In claim 14, lines 13-14 "said first and second base station transmitters" lacks clear antecedent basis. Also in claim 14, it is not clear how the "filtering, amplifying and downconverting means" are connected.

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 C.F.R. § 1.75(d)(1) and M.P.E.P. § 608.01(1). Correction of the following is required: The specification must fully support the

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limitations of "first frequency with first code and second code" as set forth in claims 1, 10, "first frequency with third code" as set forth in claim 10, "first code or second code includes base station code combined with access code" as set forth in claim 3, "diversity selection of symbols from said first and second demodulation signals" as set forth in claim 5, "access code is composed of a base station code combined with a traffic channel code" as set forth in claim 9, "first code, second code, third code" as set forth in claims 11-13 and 15.

7. The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "filtering, amplifying and downconverting means", "first and second base transmitters" of claim 14 must be shown or the feature cancelled from the claim. No new matter should be entered.

8. Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure

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describes," etc.

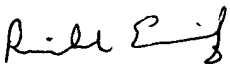
9. The Abstract of the Disclosure is objected to because the term "disclosed" should be avoided. Correction is required. See M.P.E.P. § 608.01(b).

It would be greatly appreciated if the applicant submits the serial numbers for patent applications as indicated on pages 7 and 14.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Vo whose telephone number is (703) 305-4786.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

N. Vo:tlr nv
January 15, 1993


Reinhard J. Eisenzopf 1-19-93
Supervisory Patent Examiner
Group 260